NIRFlex N-500 Calibration for Fishmeal

Calibration is a question of experience. The Buchi pre-calibrated applications relieve you completely from that task. On the other hand you are not limited. The major Buchi advantage: you can use our pre-calibrations or you can calculate your own with NIRCal 5.0.

Uses

Fast and accurate simultaneous analysis of several parameters on fishmeal using Buchi NIR-Technology. Rapid availability of defined quality criteria is vital for efficient production and quality control. Loss of production is avoided and high reproducibility from charge to charge guaranteed.

Reference methods

All the reference chemistry is performed with official methods; e.g. heating oven for solids, Soxhlet for fat, Kjeldahl for Protein…

Requirements for this application are:

- the Büchi NIRFlex N-500
- the Measurement Cell Solids with Petri Dish add-on
- the appropriate computer hardware and Büchi NIRWare

Parameters

A «robust» calibration is guaranteed because more than 700 different samples from Asia, Europe and South America were analyzed to calculate it. The following parameters are measured:

– Fat	5.2 – 12.8 %
– Protein	30.0 – 72.0 %
– Moisture	2.4 – 10.6 %

Basis of calculation

The Büchi Chemometric software NIRCal® is used in the NIRFlex N-500 parameter predictions. NIRCal® is a proven and tested software tool with comprehensive calculating possibilities.

Calibration of properties in fishmeal by NIRFlex N-500

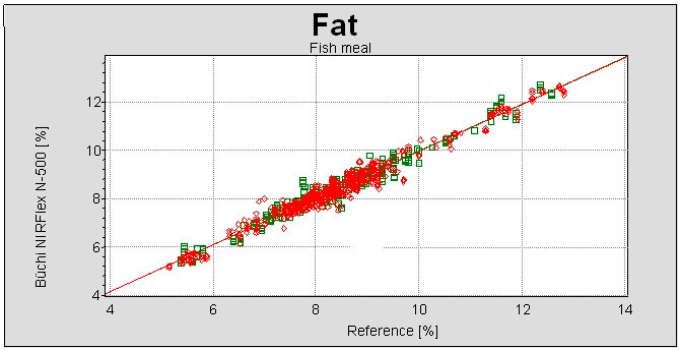
Parameter	No. of samples for calibration	Calibration range [%]	SEP	R-Coefficient
Fat	720	4.8 – 12.8	0.29	0.983
Protein	780	30.0 – 72.0	1.11	0.971
Moisture	680	2.4 – 10.6	0.34	0.996

Reliable
An accurate robust calibration has been established over a wide and comprehensive calibration range using samples from many different sources.

Precise
The precision of a calibration is judged by the standard error of the prediction (SEP) and the regression coefficient of the calibration fit. A regression coefficient close to 1 is optimal for the precise prediction of new samples.

Flexible
The fishmeal application for the NIRFlex N-500 is ready-to-use. It allows results to be generated from Day One. With the necessary experience in Chemometrics, the user can adjust the calibration to a different sample matrix – alone or with our support.

Required hardware:
– Büchi NIRFlex N-500
– Measurement Cell Solids with Petri Dish add-on
– PC-installed Büchi software NIRWare



Order No. N555-510
Pre-calibrated fishmeal application

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